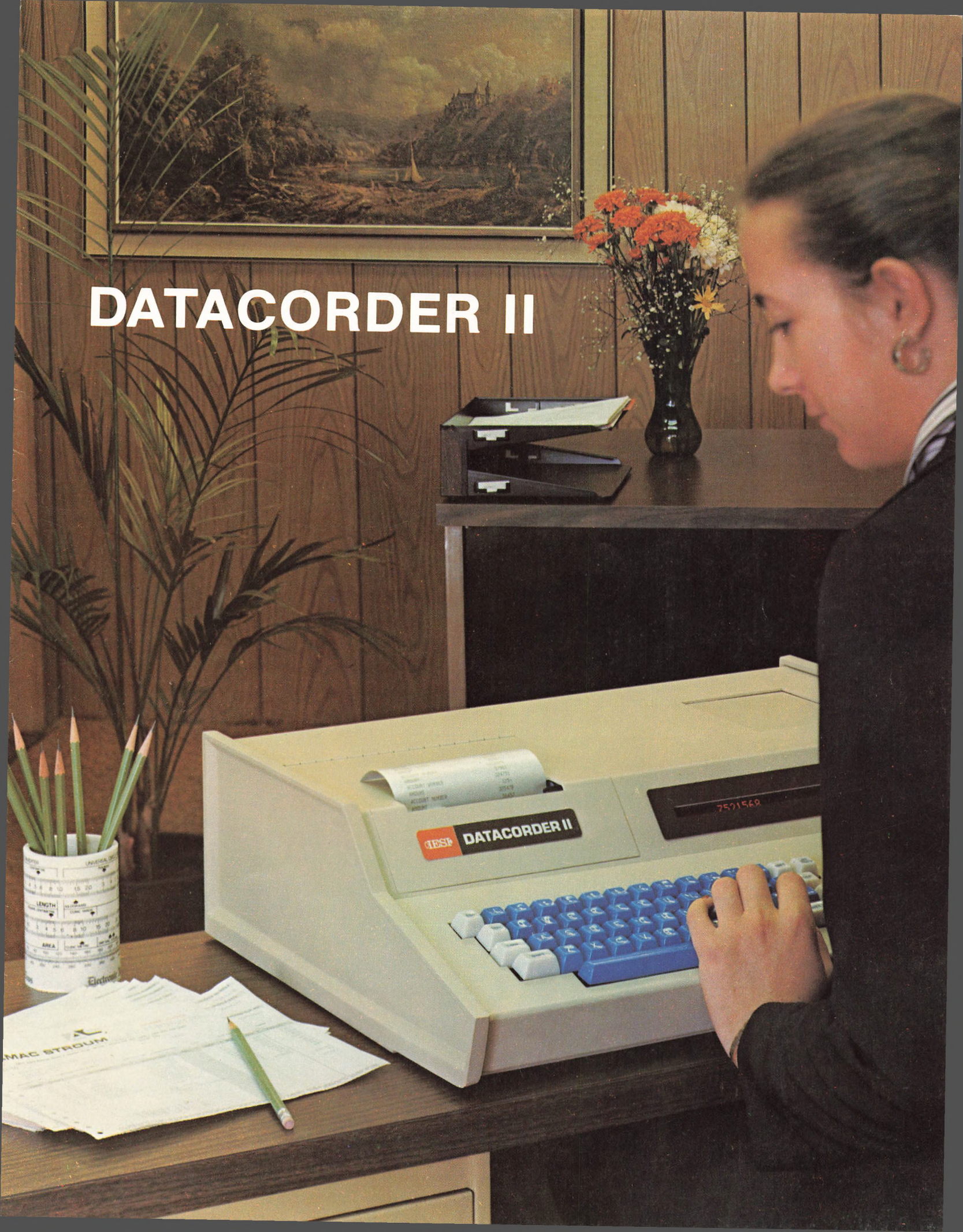
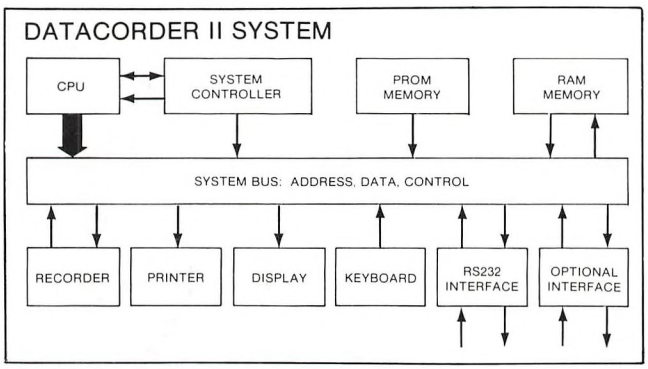
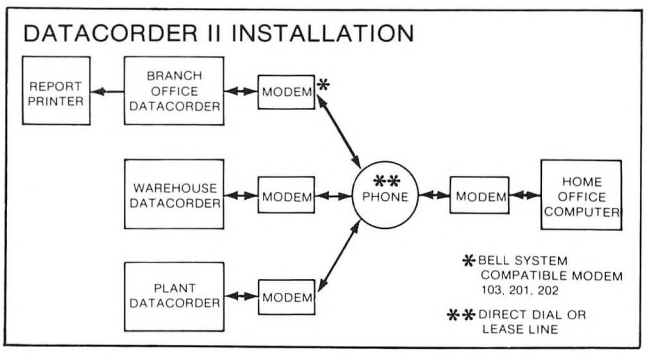

DATACORDER II
IBSI
DATACORDER II

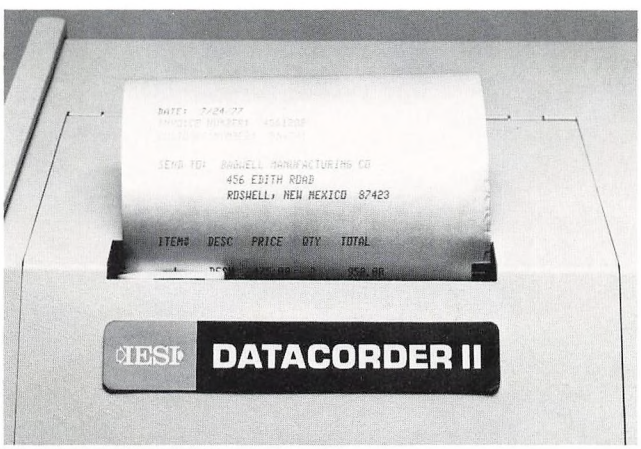
DATACORDER® II + YOUR COMPUTER = LOW COST DISTRIBUTED DATA PROCESSING CENTER

DATACORDER II IS A COMPLETE COMPUTER SYSTEM IN A DESK TOP UNIT

NOW YOU CAN AFFORD COMPUTER POWER WHERE YOU NEED IT MOST. . . AT THE SOURCE OF YOUR DATA







® REGISTERED TRADE MARK

SOURCE DATA ENTRY SAVES TIME AND MONEY

Put the DATACORDER where your data originates -- in branch offices, warehouses, plants, stores, etc. Your existing employees use the DATACORDER to record data for use by your central computer, and can generate documents, like invoices, orders, etc., at the same time. The recorded data is transmitted via phone to the central computer after hours at low rates. Reports needed at the remote site are transmitted back to the DATACORDER and printed. Delays due to mail or handling of forms are eliminated. The DATACORDER prompts the operator through the entire operation so that anyone in the office can use it with minimum training.

FRONT END DATA PROCESSING REDUCES COSTS

The DATACORDER edits and balances all keyed input. Data is "clean" before it is transmitted. Your central computer spends less time in preliminary error checking. Responsibility for the correctness of data is placed in the field, with the people who know the data best. Errors go down and productivity goes up.

INTEGRAL PRINTER FOR AUDIT TRAIL AND COMMUNICATIONS

DATACORDER II has an integral 48/80 column alphanumeric printer. All keyboard data can be printed. Error control is simplified. Hard copy records of input can be maintained for audit purposes. Condensed print size allows the use of the DATACORDER as a communications terminal.

DATACORDER II IS COMPATIBLE

DATACORDER II is compatible with your system. Communications is programmable to fit your system. The Cassette tape is ECMA/ANSI (the industry standard) compatible. Reformatting capability means the output of the DATACORDER fits your existing software, with little, if any, reprogramming of your central computer required.

DATACORDER II = QUICK INSTALLATION, EASY OPERATION, ACCURATE INPUT, REDUCED COST

DATACORDER II
THE DATA PROCESSING TERMINAL

- **A** RS232 communications plug
- **B** Optional interfaces
- **C** 110V/230V power
- **D** ECMA/ANSI compatible philips type cassette recorder, with READ-AFTER-WRITE
- **E** 40 column electronic display
- **F** Control keys
- **G** Calculator keyboard
- **H** Typewriter keyboard
- **I** 26 pounds
- **J** 48/80 column alpha numeric printer

FLEXIBLE COMMUNICATIONS

Use the DATACORDER like a Teletype one minute, like an IBM 3741 the next, and a Mohawk 6403 keytape the minute after. Data keyed into the DATACORDER can be transmitted directly into your central computer interactively, without recording, like an on-line CRT, or can be recorded for batch transmission like an IBM 3741 or Datapoint 1100.

CURRENT COMPATIBILITY

IBM	INFOREX
BURROUGHS	BASIC IV
HONEYWELL	DEC
UNIVAC	DATAPOINT
NCR	SYCOR
MOHAWK	MICRODATA
QUANTEL	VARIAN
MITRON	TTY

COMMUNICATIONS PROGRAMMED FOR YOUR NEEDS

You tell us what communications protocol(s) you need. IESI checks its library and, chances are, finds a communications program that will satisfy your needs. If not, an IESI systems engineer will configure a program that will fit your needs exactly.

IF YOU DON'T HAVE COMMUNICATIONS THE DATACORDER CAN STILL WORK FOR YOU

If you don't have communications, and your central computer can't handle it without expensive upgrade, IESI can configure an offline data collection system that will work effectively for you no matter what your system is.

ALL FEATURES OF COMMUNICATIONS ARE PROGRAMMABLE

Hardware features built into the DATACORDER allow full program flexibility in communications. This lets the DATACORDER fit into your network today, and fit into your network tomorrow, whatever it is.

PROGRAMMABLE FEATURES

SYNCHRONOUS/ASYNCHRONOUS
100 BAUD TO 9600 BAUD
1, 1.5 OR 2 STOP BITS ON ASYNC
ODD, EVEN, OR NO PARITY
ANSWERBACK MEMORY
BLOCK STRUCTURE
FULL/HALF DUPLEX
INTERNAL/EXTERNAL/NO CLOCK
REVERSE CHANNEL
CHARACTER SET
ERROR CONTROL

SYSTEM REQUIREMENTS

The DATACORDER is used with a standard Bell modem or its equivalent. It can be optionally supplied with an internal 202 type modem for direct connect to the dial phone system. The DATACORDER supports leased line communications.

PERIPHERALS

PRINTERS

Matrix printers can be attached to the DATACORDER to allow document generation and report printing. Printers use tractor pin feed forms and are capable of generating multi-part copies. Speeds from 60 cps to 180 cps are available. Print line can be either 80 column or 132 columns wide.

IESI has tape to print utility programs that allow data recorded on tape cassette, either generated by QUICK, BASIC, or received data, to be dumped to the printer. The program responds to standard ANSI printer control characters in the first position of the print line.

COMPUTER TAPE DRIVE

The DATACORDER can be configured as a receiver/pooler with the addition of a computer tape drive. Data received over the phone line by the DATACORDER is recorded offline directly on the computer tape for subsequent processing by your central computer.

SECOND CASSETTE DRIVE

An additional cassette drive can be attached to the DATACORDER for installations and applications requiring more storage than is available on one cassette, or that require the ability of copying data tapes. This cassette drive is external to the DATACORDER.

THREE PROGRAMMING LEVELS

FOR DATA ENTRY - THE QUICK PROGRAMMING LANGUAGE

Every DATACORDER II is programmable using QUICK. Programs are stored on cassettes and loaded into memory as needed. The programmer interacts with the DATACORDER to generate a program, simply answering a series of questions asked about each data item to be entered. No lines of "code" need ever be written to generate a program.

QUICK FEATURES

DATA INPUT/EDIT
- Prompt Messages
- Minimum/Maximum field size
- Data Type
- Check Digit
- Table Lookup
- Range Check

DATA PROCESSING
- Leading, Trailing, Overpunch Sign
- Automatic Sign Reversal
- Left/Right Justify
- Zero/Blank Fill
- Automatic Display
- Automatic Constant Entry
- Sequence of I/O Independent
- Automatic Field Copy
- Printing of Entry

REGISTER OPERATIONS
- 10 Fifteen Digit Registers
- Register Operations (+), (-), (X)
- Floating Point Arithmetic
- Constants
- Register Compare & Branch
- Register Compare to zero & Branch
- Print, Display, Record, Clear

BRANCHING
- Automatic Branch to next Field
- Automatic Branch to beginning of Record
- Automatic Branch on Table or Range Value
- Automatic Branch on Zero Compare
- Operator Controlled Special Branch

OUTPUT
- Record Size Specified
- Blocking Factor Specified
- Field Position in Record Specified

OUTPUT FORMATTING MEANS NO SYSTEMS REPROGRAMMING

Data which is input using a QUICK program is reformatted to fit directly into existing computer systems. Little if any reprogramming will be required at your central computer.

EDIT AND PROCESSING FEATURES MEAN ACCURATE DATA AND LOW PROCESSING COSTS

The DATACORDER QUICK editing features prevent operators from making careless mistakes. Balancing features require that batches of data, or individual documents must be in balance BEFORE the data reaches your central computer. Computer time due to reruns, out of balances, etc., is minimized. Responsibility for the accuracy can effectively be put with the people responsible for using the data.

FOR FORMS GENERATION - THE QUICK FORMS GENERATOR

A separate version of QUICK is available to allow direct programming for forms generation. Invoices, orders, picking tickets, shipping documents can now be prepared at the same time data is being captured for use elsewhere in your system.

TYPE YOUR INVOICES WHILE YOU RECORD YOUR DATA

Your operator keys in your invoice data to the DATACORDER. Items required by your inventory, accounts receivable, sales analysis, etc., systems are recorded on cassette. Items to be printed on the invoice are stored in memory. When the invoice is complete, the DATACORDER prints the invoice on the optional line printer, while the next invoice is being keyed.

AUTOMATIC EXTENSIONS AND TOTALING PREVENT ERRORS

Data items can be entered, accumulated in registers and printed as needed. In the invoicing example, item quantity and price can be entered from the keyboard. The extensions, subtotal, tax and total are all automatic.

FOR STAND-ALONE PROCESSING - EXTENDED BASIC

Use Extended Basic to program those jobs which QUICK and QUICK Forms were not designed to do. The Extended Basic Interpreter runs in 12k of memory leaving an additional 4k of memory for user generated programs.

SIMPLE PROCESSING OF QUICK GENERATED DATA TAPES

Using Extended Basic you can generate programs to write simple reports based on QUICK data tapes. For example, daily sales analysis by department can be prepared by processing a QUICK data tape containing invoice data with an Extended Basic program.

SCIENTIFIC AND BUSINESS APPLICATIONS

Extended Basic can be used to do complex engineering and business applications such as stress analysis, coordinate geometry, circuit analysis, analysis of variance, regression analysis, compound interest, depreciation and amortization, financial projections.

SPECIFICATIONS

CENTRAL PROCESSOR
8 BIT parallel microprocessor; 158 instructions; 18 internal 8 BIT registers; 1.6 micro second instruction execution speed; interrupts.

MEMORY
1k bytes of PROM memory for machine startup sequence; 16k bytes of RAM memory for program execution, expandable to 64k.

KEYBOARD
Teletype style keyboard with calculator pad and control keys. Standard QWERTY layout, with ESC, CTRL, SHIFT, LOCK, ENTER, SPACE, LINE FEED, REPT and SKIP on the typewriter section; BACKSPACE, CLEAR ENTRY, CLEAR REC, digits 0 through 9 on the calculator pad; +/ENTER, minus (-), =, SB, MODE, MS, MR, X, ÷, PRINT, CALC, EOT, ST, T on the control key pad. N key rollover. Fully buffered in program memory. Electronically Encoded.

RECORDER
Philips-type cassette recorder; ECMA/ANSI compatible; 800 BPI, Phase encoded recording technique; read after write recording head; EOT/BOT hole sensor; reel to reel drive (no capstans); push to open/push to shut cassette door; 10 IPS tape speed; 1.2" IRG; certified computer grade digital cassette, 300 ft.; less than 1 bit error per 1×10^8 bits reading throughout tape; 75 IPS tape search speed; 48 second maximum rewind time; two independent tracks allow data to be written independently on both cassette tracks without physically turning cassette over. Double buffered. Capacity can be as high as 430,000 characters (2 tracks).

PRINTER
Full alphanumeric; 48/80 characters/line; electrostatic discharge; 4¾" wide; 5 x 7 dot matrix; 5 lines/inch; 107 ft. roll aluminized coated paper; 3 lines per second print speed; field changeable head; multiple paper sources.

DISPLAY
40 characters; electronic; one line; 5 x 7 dot matrix characters; under program control.

ALARM
Mild beeper provides audio feedback for each data entry keystroke, and alerts operator to critical steps or rejected entries; under program control.

I/O PLUGS
STANDARD:

RS-232: Full standard RS232 interface including supervisory channel signals; driven by universal asynchronous/synchronous receiver transmitter; two programmable baud rate generators; synchronous clock generation circuitry; baud rates to 9600 baud.

OPTIONAL:

CENTRONICS PRINTER INTERFACE: Parallel interface capable of interfacing to any of the Centronics family of printers.

THREE WIRE SERIAL INTERFACE (RS232): For connection of serial peripheral devices requiring only data signals and terminal ready/clear to send.

PHYSICAL
SIZE: 6¼" H x 21" W x 17" D

WEIGHT: 26 lbs.

POWER: 115V/230V (+10%, -15%); 60 cycle (±2%); 3 wire grounded.

ENVIRONMENTAL:
OPERATING -- 50°F - 110°F ambient temperature
10% - 90% relative humidity, non condensing.

STORAGE -- 0°F - 160°F ambient temperature
10% - 95% relative humidity, non condensing.

MAINTENANCE, TRAINING, DOCUMENTATION

The DATACORDER II has maintenance support nationwide in the United States and Canada. Service Dispatching is handled from IESI. Installation by IESI is available.

Training in programming, and system implementation is available from IESI. Documents available are: DATACORDER operations manual, Quick programming manual, DATACORDER II maintenance manual, Communications addendum.

BUSINESSES AND APPLICATIONS CURRENTLY USING DATACORDER

ACCOUNTANTS OFFICE
CONSTRUCTION
AUTO AND TRUCK DEALERS
CREDIT UNIONS
TRADE SCHOOLS
CABLE TELEVISION
MANUFACTURING
BEARING DISTRIBUTORS
BEVERAGE DISTRIBUTORS
PHOTO FINISHING
GRAIN COOPERATIVE
MEDICAL CLINICS

IESI INTERNATIONAL ENTRY SYSTEMS INCORPORATED
408 N.E. 72nd Street ▪ Seattle, Washington 98115
Tel: (206) 525-6800

LITHO IN U.S.A.

What can a Datacorder II distributed data entry system do for you?

Datacorder II gives you more computer benefits with fewer computer problems.

Practically every business uses computers. They may be on-site mini-computers, home office computers, or service bureau computers. We all use them, but few of us take full advantage of computers.

For example, a computer can process your daily, weekly or monthly ledger in a matter of seconds, but it usually takes days and weeks from the time the accounting data leaves your office until you receive your computer reports.

A computer can lower your costs by maintaining daily—even hourly—inventory control records. It can tell you what and when to reorder to meet delivery schedules. But how many companies take advantage of it?

If a wholesale distributor had direct access to his home office computer, he could simplify paperwork and reduce personnel costs.

By computerizing sales leads, buying habits, regional purchasing patterns, and equipment MTBF, a sales manager can get vital information that would make a sales force more productive and lower the cost per sale.

Unfortunately, most of us don't take full advantage of computers for one basic reason: the cost and difficulty involved in getting our input into a format the computer understands.

Datacorder II eliminates the most costly and confusing drawback to taking full advantage of computers. An increasing percentage of the cost and problems of data processing is in the routing, scheduling and processing of your source documents through the high production keypunching department of a data center to create computer-readable input.

Keypunching takes time. It costs money. And it creates mistakes. On the average, keypunching reduces the accuracy of your data by four or five percent because the keypunch operator usually isn't familiar with the unique features of your business. Datacorder II does away with all these problems because it does away with the traditional form of keypunching.

You enter the data. With the Datacorder II, you don't have to hire a keypunch operator. Your existing staff, without any data processing training, can enter data easily. General ledger, receivables and payables posting, invoicing, inventory entries, payroll data and other input is simply keyed into the Datacorder II from the same forms you've always used.

The Datacorder II translates the input into a format your computer understands, stores the information on cassette and provides you with a hard copy for your files. At the end of the posting period, you simply transmit the cassette data via a phone line to your computer.

Error free accuracy. Datacorder II users throughout the Country are achieving exceptional accuracy while eliminating traditional keypunching. The Datacorder II restricts the operator from making improper entries and the system itself checks each data field for accuracy before being stored on cassette.

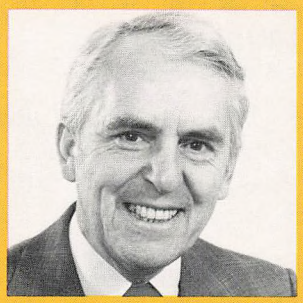
Completely compatible with your computer. Datacorder II is fully compatible with most major computer protocols including IBM, Burroughs, Honeywell, Univac, NCR, Mohawk, Quantel, Mitron, Inforex, Basic IV, DEC, Datapoint, Sycor, Microdata, Varian and TTY.

With Datacorder II you don't have the expense of developing costly communications programs.

Datacorder II reduces your risks. When you have a Datacorder II, there's no need for your ledger and other important files to leave your office. Neither you nor your computer service center need to worry about documents being lost or misplaced.

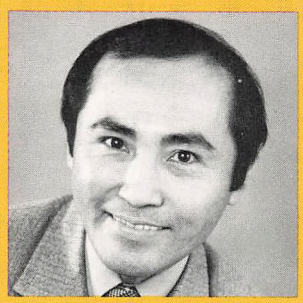
Datacorder II speeds up turn-around time. By eliminating traditional keypunching, you not only reduce costs and errors, you also eliminate the most time consuming aspect of data processing. Many Datacorder II users get one day turn-around on their computer reports.

Your Datacorder II can also interface directly with off-line printers so that you can receive data back via phone lines to generate your own in-house printouts.



Company President *"Datacorder II has enabled me to move my company squarely into the 'computer age' without going to all the expense of buying and installing an in-house computer.*

"I get up-to-the-minute computer reporting because I have up-to-the-minute data entry. I can make decisions with enough time to achieve results."

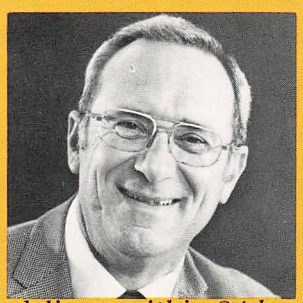


Corporate Data Processing Manager *"With Datacorder II, I was able to reduce my department overhead because we were able to eliminate almost all of the traditional key-punching operation.*

"With fewer people between the source data and the computer, there were fewer opportunities for input errors. Efficiency and accuracy both improved. Datacorder II has helped my company—and my career!"

Computer Service Bureau Manager *"Datacorder II has changed my operation. Keypunching used to be my biggest headache. I was paying a high hourly rate for operators and there was always a big turnover of people which created personnel and training problems. Fluctuating volumes were a constant scheduling problem. I was spending too much time and money worrying about keypunching and not enough time developing new business.*

"But now, I sell and lease Datacorder IIs to my customers. I end up reducing my costs and making more profit."



Wholesale Distributor *"Datacorder II has been a big help for me in two areas: order entry and inventory control.*

"Now I can get orders, price changes, and special orders in from my customers, fill the orders and make delivery within 24 hours.

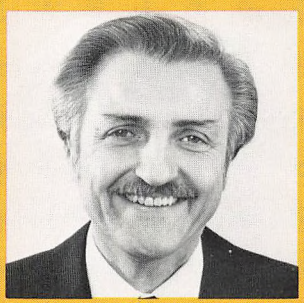
"As for inventory stock, I now know precisely the levels at all my branch warehouses every morning."

Accountant *"When I purchased my Datacorder II, I was handling complete accounting and bookkeeping services for about ten clients, with about 2000 entries per month.*

"Datacorder II paid for itself by eliminating all my keypunching costs. And, with the time that I saved, I was able to take on additional clients..."

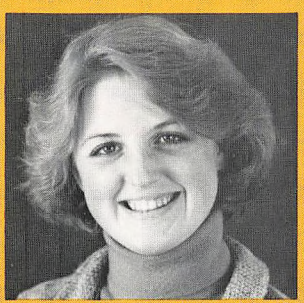
Regional Office Manager *"Datacorder II has freed up my time and made reporting a lot easier. Now, instead of the big end of the month paperwork monster, we simply key reports in on a daily basis. My secretary handles everything.*

"Our Datacorder II is hooked-up directly with a printer here in the office so the home office computer can feed back profitability reports on a daily or weekly basis."



Retail Store Manager *"With my Datacorder II unit, I can get instant reports for daily profit control.*

"Each day I key in my daily sales receipts, employee time cards and other pertinent information and each day I know whether I'm overstaffed, whether I have enough product, what's moving well, what I need to reorder—you name it. That kind of information really helps."



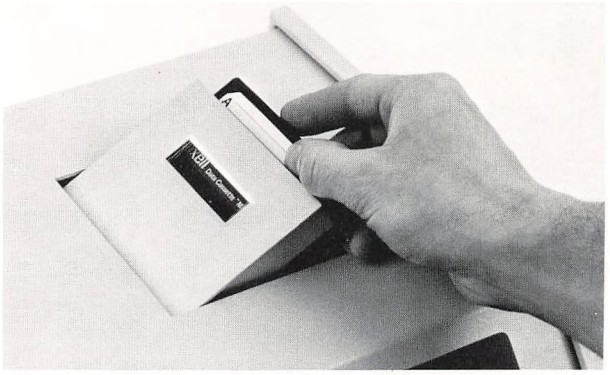
Bookkeeper *"Datacorder II has been great for me because now the computer does all the routine work and I have more time to think about what I'm doing.*

"I key in data directly from source documents and all the balancing is done by the Datacorder. Our reports are more accurate than ever and we get them back faster."

Four easy steps from start to finish.

Datacorder II was designed and built to be operated by staff accounting or secretarial personnel with no formal computer or data processing training.

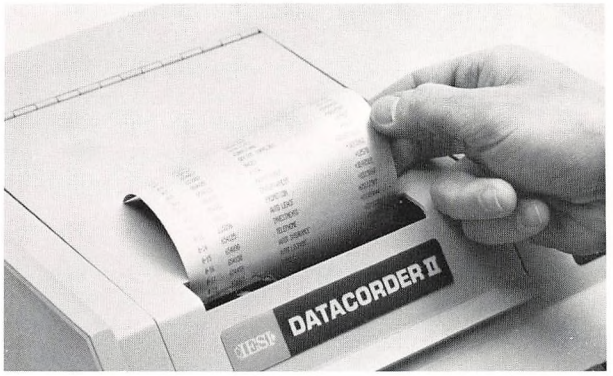
With hundreds of Datacorders now in use throughout the Country, experience indicates that it requires only two or three hours to learn the system.



1. Select the program. The operator selects the correct program tape for the type of data to be entered. The Datacorder II loads the program from the tape cassette into its memory and checks to insure the program is loaded properly.

2. Key in the data. The operator replaces the program with a blank, or partially completed data tape and begins keying in the information directly from source documents.

Through the visual display, the Datacorder II prompts the operator each step of the way and beeps a warning if the operator makes a keying error.

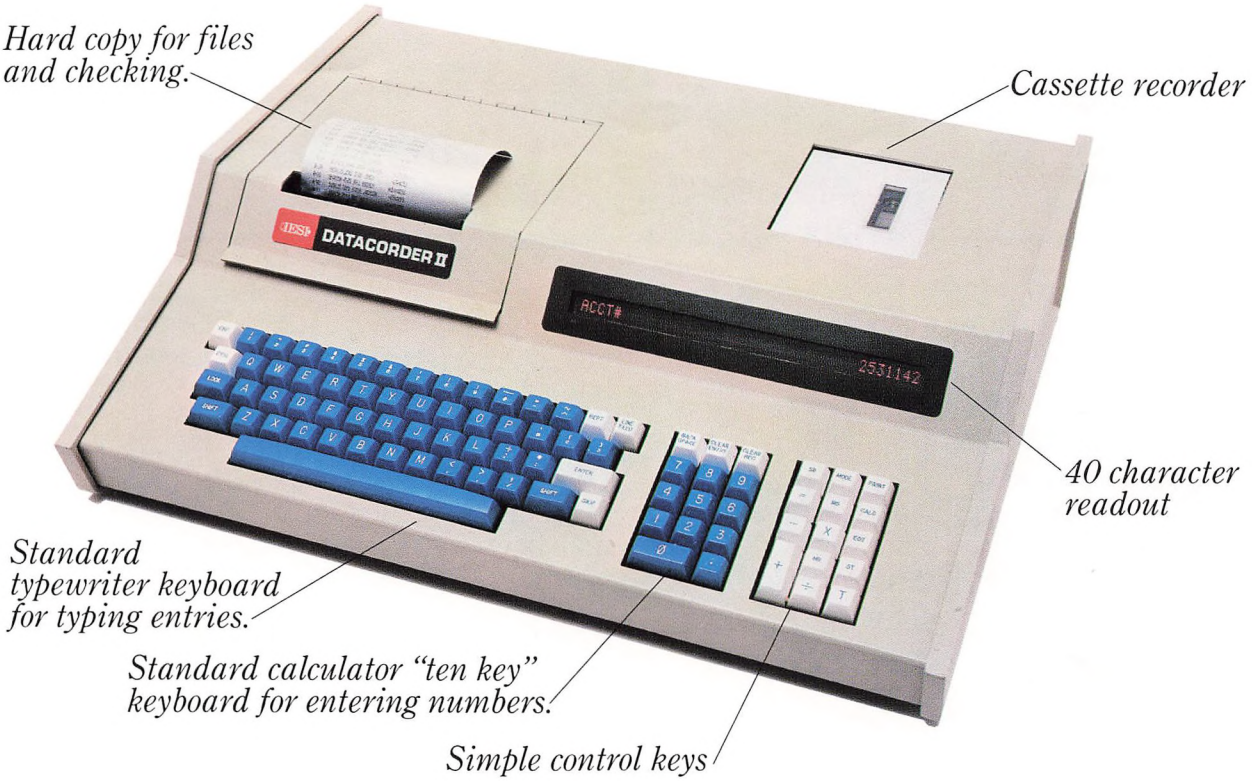


3. Balance the data. Once data has been entered on the tape, the operator can use the Datacorder II printed "hard copy" to review and balance the input. When the input is balanced, the operator is ready to transmit the data directly to the computer center or store the partially completed cassette for further entries at a later time.

4. Transmit data to computer center. When your input data is complete, simply dial the computer center, establish contact, and then press two keys on the Datacorder II.

The data is transmitted via phone lines. A phone interface unit called a "modem" enables the Datacorder II to communicate directly to the computer center.

If you prefer, the cassette may also be mailed or delivered directly to the computer center.



Forget about installation problems.

Datacorder II is ready to go to work the day you receive it. All you need to do is plug the machine into a standard three-wire grounded electrical outlet. Each Datacorder II undergoes extensive testing and quality control processing before it leaves the factory. Datacorder II has an excellent history of reliability.

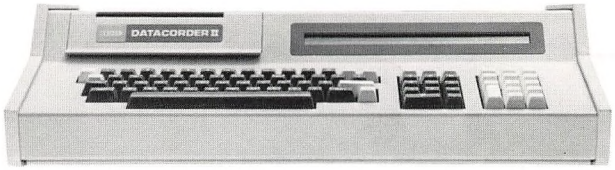
Complete training program supplied with each machine.

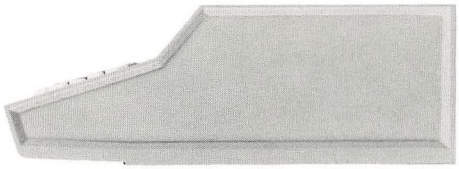
Each Datacorder II arrives at your site complete with a User's Manual, Operator Training Program, Utility Program and Blank Cassette Tape.

Experience indicates that it requires about two or three hours of practice—using the Operator Training Program and completing the exercises—to learn how to use the Datacorder II.

The User's Manual is a comprehensive manual that supplies all the information necessary for day-to-day operation. Among other things, it contains information about the overall system, program loading, care and cleaning and overall operational instructions.

Specifications





Physical
SIZE: 6¼" H x 21" W x 17" D
WEIGHT: 26 lbs.
POWER: 115V/230V (+10%, −15%); 60/50 cycle (±2%); 3 wire grounded.
ENVIRONMENTAL:
OPERATING −50°-110°F ambient 10%-90% relative humidity.
STORAGE−0°F-140°F ambient 10-95% relative humidity.

Central Processor
8 BIT parallel microprocessor; 158 instructions; 18 internal 8 BIT registers; 1.6 micro second instruction execution speed; interrupts.

Memory
1k bytes of PROM memory for machine startup sequence; 16k bytes of RAM memory for program execution, expandable to 64k.

Keyboard
Teletype style keyboard with calculator pad and control keys. Standard QWERTY layout, with ESC, CTRL, SHIFT, LOCK, ENTER, SPACE, LINE FEED, REPT and SKIP on the typewriter section; BACKSPACE, CLEAR ENTRY, CLEAR REC, digits 0 through 9 on the calculator pad; +/ENTER, minus (−), =, SB, MODE, MS, MR, X, ÷, PRINT, CALC, EOT, ST, T on the control key pad. N key rollover. Fully buffered in program memory. Electronically encoded.

Recorder
Phillips-type cassette recorder; ECMA/ANSI compatible; 800 BPI, Phase encoded recording technique; read-while-write recording head; EOT/BOT hole sensor; reel to reel drive (no capstans); push to open/push to shut cassette door; 10 IPS tape speed; 1.2" IRG; certified computer grade digital cassette, 300 ft.; less than 1 bit error per 1 x 10^8 bits reading throughout tape; 75 IPS tape search speed; 48 second maximum rewind time. Double buffered. Capacity can be as high as 430,000 characters (2 tracks).

Printer
Full alphanumeric; uses 137 ft roll aluminized coated paper; 80 characters/line; 5 lines/inch; prints 3 lines/sec.; electrostatic discharge; field changeable head.

Display
40 characters; electronic; one line; 5 x 7 dot matrix characters; under program control.

Alarm
Mild beeper provides audio feedback for each data entry keystroke, and alerts operator to critical steps or rejected entries; under program control.

I/O Plug
STANDARD:
RS-232: Full standard RS 232 interface including supervisory channel signals; driven by universal asynchronous/synchronous receiver transmitter; two programmable baud rate generators; synchronous clock generation circuitry; baud rates to 9600 baud.
OPTIONAL:
PARALLEL PRINTER INTERFACE: Parallel interface capable of interfacing to any of the Centronics family of printers, or equivalent.
THREE WIRE SERIAL INTERFACE (RS232): For connection to serial peripheral devices requiring only data signals and terminal ready/clear to send.

Datacorder II is manufactured and distributed by International Entry Systems Inc., 408 N.E. 72nd St., Seattle, WA 98115. Phone 206/525-6800 or call toll free 1-800-426-7740.

The data entry people. **IESI**

TO: DON, DAVE, BRUCE, LEO, TRUMAN, ETC.

FROM: LARRY

SUBJ: F.Y.I.

IESI Ready to Ford Mainstream Micro Market

Datacoder Line Gets Full VDT

By John Greitzer
CBN Staff

SEATTLE — International Entry Systems Inc. (IESI), maker of the Datacoder line of data entry devices, is preparing a CP/M-based full-screen version of the Datacoder for introduction into the mainstream microcomputer market later this year.

Until now the firm has concentrated solely on the data entry market with much of its Datacoder product line going to service bureaus that place the devices at their own customer sites as remote data entry stations.

The Datacoder II, with more than 2,000 installations, is Z80-based with a single-line display built into the desktop unit. The machine offers 1 Kbyte of PROM memory for machine start-up sequence and 16 Kbytes of RAM memory for program execution, expandable to 64 Kbytes.

More recently, IESI came out with the Datacoder III, a similar device but with a full-size VDT added to it.

Joe G. Winston, founder and president of IESI, said his company isn't done yet. The Datcoder IV and Datacoder V should be ready to ship before the end of 1981, both featuring a diskette storage medium instead of the cassette used on the Datacoders II and III.

The Datacoder line now on the market employs three of the Z80 microprocessors: one for main logic, one for the Teletype-type keyboard and one for the display.

The models IV and V will have additional microprocessors to run the storage diskette. Winston said his firm probably will stay with the Z80 since the new 16-bit micros don't appear to offer any real benefits for IESI applications.

Winston expressed interest in Zilog's recent announcement of a 10-MHz version of an 8-bit microprocessor although he hasn't actually seen that product yet. Winston also indicated that after the Datacoder IV and V have been introduced with the CP/M operating system, he may also look into the possibility of implementing the Oasis operating system.

International Entry Systems Inc., Joe Winston, 408 N.E. 72nd Street, Seattle, Wash. 98115, (800) 426-7740 or (206) 525-6800 within Washington state.

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The Datacoder V will feature the full VDT and will benefit from the widely-used CP/M operating system, which means users will have a huge volume of applications software already written and ready to run on the Datacoder machines, Winston explained.

Winston said many of the service bureaus that buy his product line have looked at the Apple II and TRS-80 microcomputers, but "they aren't using them. Service bureaus tend to have high-volume applications and the Apples and TRS-80s really are kind of clumsy for six-hour-a-day, high-volume work.

"Almost everyone I know in a service bureau has bought one or two [other microcomputers] but they haven't implemented them. There's no effective bi-synchronous communications software for those kinds of machines and they're just not designed for large amounts of data."

However, he said, the service bureaus continue to look for a complete microcomputer which they can farm out to their customer sites. IESI hopes to give them what they want with the Datacoder V.

Winston also said the Datacoder line gets "pretty good play as a store and forward device within local network configurations."

Eyeing A Niche

Winston hopes the Datacoder V will take IESI into new markets and "give us a shot at going through the mainstream distribution channels microcomputer vendors go through. Our Datacoder really isn't a stand-alone device so we can't market it through the iron peddlers. I expect the Datacoder V will crack some of those markets for us. We'll be talking to distributors about it."

IESI is looking for a niche for the Datacoder V, realizing it's hard to compete with the volume-produced Apples, TRS-80s and Commodores in the general marketplace.

That niche, Winston said, will be the industrial data entry market which needs a local en-

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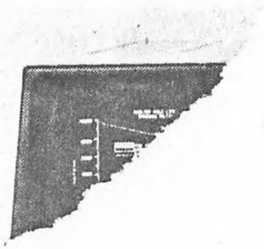
Modem Subs For Bell 202

SEATTLE — A 1,200 bit/sec Bell 202-compatible stand-alone direct-connect modem that can be used asynchronously or synchronously by any device using a standard RS-232C interface is available from International Entry Systems, Inc. (IESI).

The Datacorder provides a synchronous clock for those devices requiring it. Pins 15 and 17 are active as transmitter and receiver clock, respectively. In addition, the modem also has the ability to autodial the phone.

The unit costs $575, IESI said from 408 N.E. 72nd St., Seattle, Wash. 98115.

Textronix 4020 Gets Graphics, Color Features



BEAVERTON, Ore. — Tektronix, Inc. has introduced two CRT terminals featuring text handling, graphics and color capabilities.

The two terminals make up the 4020A series, an enhanced line of Tektronix's 4020 series.

The 4025A and 4027A terminals handle data communications, with flagging, at speeds of up to 9,600 bit/sec. The 4025A has a 16K-byte display memory base while the 4027A features a 48K-byte base of graphics memory in addition to the 16K-byte base.

Increased local graphics throughput capability in the 4025A includes

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